

Page -8-

CLAIMS

1. Device for flexural stiffening and/or protection of a shoe, in particular a sports shoe adapted to be fixed to a sports apparatus, characterized in that it includes a cover (1) capable of covering the front surface of the shoe and extending from the flexion fold zone up to the front end zone of the sole.
2. Device according to claim 1, characterized in that it is journalled on the sole.
3. Device according to claim 1 or 2, characterized in that it is removably mounted.
4. Device according to one of claims 1-3, characterized in that it extends from the tibial support zone up to the metatarsophalangeal articulation zone and/or the zone of the base of the toes.
5. Device according to one of claims 1-4, characterized in that it comprises an insert (5), affixing the system to the shoe by the sole (9), and a cover (1), affixed to the insert (5), which completely or partially covers the front surface of the latter by manual thrust or traction from the user.
6. Device according to one of claims 1-5, characterized in that the insert (5) and the cover (1) form a journal, the insert (5) constituting the fixed portion thereof, and the cover (1) the portion movable along a front-to-rear travel.
7. Device according to one of claims 1-6, characterized in that the implantation of the insert (5) is located along an axis transverse to the longitudinal axis of the shoe.
8. Device according to claim 7, characterized in that the implantation of the insert (5), beneath or on both sides of the sole (9), in a zone demarcated at the front by the tip of the foot, at the rear by the front surface of the plantar arch, and laterally by the edges of the sole (17) in their entire thickness.
9. Device according to one of claims 1-8, characterized by an insertion method (shaft 5, lateral inserts) extending through all or part of the sole (9).
10. Device according to claim 2, characterized in that the cover (1) has a pseudo-anatomical shape corresponding to the front surface of the shoe, capable of covering it completely or partially and constituted of rigid or semi-rigid materials.
11. Device according to any one of the claims, characterized in that it is fixed to its upper and/or mid portion (1), by retaining and immobilizing means (13) already present on the shoe.
12. Device according to one of claims 1-11, characterized in that various covers of

varying rigidity are associated with a same shoe.

13. Shoe comprising a stiffening device according to any one of the preceding claims.

Quesada, J. A., & B. A. B. (2000). The effects of the 1997-1998 El Niño on the marine invertebrate community of a shallow reef flat in the central Pacific. *Marine Ecology Progress Series*, 198, 1-12.